

OIPE

ENTERED

DATE: 03/13/2002

TIME: 14:31:43

PATENT APPLICATION: US/09/771,208 Input Set : A:\407T-923710US.txt

Output Set: N:\CRF3\03132002\I771208.raw

```
3 <110> APPLICANT: MEDRANO, JUAN
         BRADFORD, ERIC
 4
 5
         HORVAT, SIMON
 7 <120> TITLE OF INVENTION: CLONING OF A HIGH-GROWTH GENE
 9 <130> FILE REFERENCE: 407T-923710US
11 <140> CURRENT APPLICATION NUMBER: US 09/771,208
12 <141> CURRENT FILING DATE: 2001-01-26
14 <150> PRIOR APPLICATION NUMBER: US 08/999,477
15 <151> PRIOR FILING DATE: 1997-12-29
17 <160> NUMBER OF SEQ ID NOS: 20
19 <170> SOFTWARE: PatentIn version 3.0
21 <210> SEO ID NO: 1
22 <211> LENGTH: 1667
23 <212> TYPE: DNA
```

RAW SEQUENCE LISTING

24 <213> ORGANISM: Mus musculus

26 <400> SEQUENCE: 1 60 27 ttgccctcaa caaagatggt ctttatggta caggttccct agcagtctgg attccggttg 120 29 tagttttagt tattettttt ttttttttt taaaeggtae gtggtegeag aegaagaaat 31 ggaagccaga gacaagcagg tactccgctc cctgcgtctg gagctgggtg ccgaggtact 180 240 33 ggtggaagga ctggttcttc agtaccttta ccaggaagga attttgacag aaaaccacat 35 tcaagaaatc aaagctcaaa ccacaggcct ccggaagaca atgctgttgc tggacatcct 300 37 gccttccagg ggccccaaag cttttgacac cttcctcgat tccctccagg aatttccctg 360 420 39 ggtaagagag aagctggaga aggcgagaga ggaagtctca gccgagctgc ctacaggtga 41 ctggatggcc ggaatcccct cacacatcct cagcagctcg ccatcagacc agcagattaa 480 540 43 ccagctggct cagaggctag gcccggagtg ggagcccgtg gtcctgtctc tgggactgtc 600 45 ccagaccgac atctaccgct gcaaggccaa ccatccccac aacgtgcatt cgcaggtggt 47 ggaggccttt gtccgctggc gccagcgttt tgggaagcag gccaccttcc taagcttaca 660 720 49 caaqqqcctc caggcaatgg aggctgatcc ctccctgctc cagcacatgc tggagtgacc 780 51 tqacccccc ccqcqcccc ccccacttq ctqtqqqqqt gqtqqqqcqt ggqttcccaa 840 53 gtcacactgg ctgaaccgga cttttctcag caggtggctt tgttctgggc ttttcagtga 55 totgtttacg gaaagagatc gtccaccact cactcaacca tcgattggct ttaattgctt 900 57 qaaqactqcg ctgttgtaac tatggtttgg aactttgtgg ctggccttta acaggaggcc 960 1020 59 agaaaaaaca caacacccac cctacccaac cccccaaaaa atcatgctac agcatcgaat 1080 61 gcaggtgtcc tgcatacaag gcagctacac ttgtgttgcc tggagactgg attgtgcatt 1140 63 tagctettea taatggtgat gataataaaa aagcaaattg tgatatagaa tgtgeetett

67 cacaccaatc ttctgttgca tagacggagg gtgtaaaaat atgggagtgg agcaagattg

69 atagcagtca tgtgacgacg gagataaata actcaggcag gatgtataga ttaagcatga 71 gacaccgaag ctccctgcag aggccaggga gagaacggaa gaccttcatc ttaacaaatt

73 gtatgaggag tctctgtcca tttgttaaag gcattggatc agagacaaga gggctcagtg

75 tttctcttga ggcctgaatg gctgaaggcg gtgagttccc gaggggcgtc atgggttgtc

1200 1260

1320

1380

1440 1500 RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/771,208

DATE: 03/13/2002 TIME: 14:31:43

Input Set : A:\407T-923710US.txt

Output Set: N:\CRF3\03132002\1771208.raw

					=												
81	gtgt	aact	tc t	atta.	aatt	c tc	tcag	tgca	aaa	aaaa	aaa	aaaa	aaa				1667
84	<210	> SE	Q ID	NO:	2												
85	<211	> LE	NGTH	: 30	4												
86	<212	> TY	PE:	DNA													
87	<213	> OR	GANI	SM:	Mus	musc	ulus										
87 <213> ORGANISM: Mus musculus 89 <400> SEQUENCE: 2																	
90	qaaq	aaat	gg a	agcc	agag	a ca	agca	ggta	ctc	cgct	ccc	tgcg	tctg	ga g	ctgg	gtgcc	60
																	120
92 gaggtactgg tggaaggact ggttetteag tacetttace aggaaggaat tttgacagaa 94 aaccacatte aacaaateaa ageteaaace acaggeetee ggaagacaat getgttgetg										180							
96 gacatcctgc cttccagggg ccccaaagct tttgacacct tcctcgattc cctccaggaa										240							
98 tttccctggg taagagagaa gctggagaag gcgagagagg aagtctcagc cgagctgcct										300							
20 44443333-3333-3-3-3-3-3-3										304							
	<21	-	EQ I	D NO	: 3												
	<21																
105	<21	2> T	YPE:	DNA													
	<21				bov	ine :	sp										
	<40						-										
						ca a	qcaa	atac	t to	qctc	cctt	cgc	ctqq	agt	taga	tgcaga	60
																agaaag	120
	cca	_				_		_				,	,,,,		-	, ,	160
	<21	_		_		,		,	,	_	,,						
	<21																
	<21																
	<21				Mus	mus	culua	s									
	<40																
	Met		_			Ala	Leu	Ala	Ala	Arg	Glv	Ala	Ser	Pro	Leu	Tvr	
124					5					10	•				15	•	
	Ser	Glv	Leu	Asn	Val	Ala	Leu	Leu	Glu		Arq	Gly	Ser	Glu	Arq	Leu	
127		1		20					25		,	•		30	•		
129	Glu	Ala	Arq	Gly	Leu	Glu	Gly	Leu	Leu	Glu	Gly	Leu	Tyr	Ala	Leu	Ala	
130			35	_			_	40			•		45				
132	Gly	Leu	Val	Ala	Leu	Leu	Glu	Val	Ala	Leu	Gly	Leu	Gly	Leu	Tyr	Leu	
133	-	50					55				-	60	-		-		
135	Glu	Val	Ala	Leu	Leu	Glu	Gly	Leu	Asn	Thr	Tyr	Arq	Leu	Glu	Thr	Tyr	
136						70	-				75	•				80	
138	Arg	Gly	Leu	Asn	Gly	Leu	Gly	Leu	Tyr	Ile	Leu	Glu	Leu	Glu	Thr	His	
139	,	•			85		•		-	90					95		
	Arg	Glv	Leu	Ala	Ser	Asn	His	Ile	Ser	Ile	Leu	Glu	Gly	Leu	Asn	Gly	
142		1		100					105				•	110		-	
144	Leu	Ile	Leu	Glu	Leu	Tvr	Ser	Ala	Leu	Ala	Gly	Leu	Asn	Thr	His	Arg	
			115													_	
	Thr	His			Leu										Thr	His	
148		130		1		1 –	135			,	-	140	4	·			
	Arg		Glu	Thr	Leu	Glu		Glu	Leu	Glu	Ala		Pro	Ile	Leu	Glu	
	145					150					155					160	
	Leu	Glu	Pro	Ara	Ser		Ara	Ala	Arσ	Glv		Leu	Tyr	Pro	Arg		
154				9	165		- 2		-)	170	- 1		4	-	175		
	Tyr	Ser	Ala	Leu		Pro	His	Glu	Ala		Pro	Thr	His	Arq		His	
157				180					185					190			
·																	

RAW SEQUENCE LISTING DATE: 03/13/2002 PATENT APPLICATION: US/09/771,208 TIME: 14:31:43

Input Set : A:\407T-923710US.txt

Output Set: N:\CRF3\03132002\I771208.raw

```
159 Glu Leu Glu Ala Ser Pro Ser Glu Arg Leu Glu Gly Leu Asn Gly Leu
    160 195 200
    162 Pro His Glu Pro Arg Thr Arg Pro Val Ala Leu Ala Arg Gly Gly Leu
                              215
    165 Leu Tyr Ser Leu Glu Gly Leu Leu Tyr Ser Ala Leu Ala Arg Gly
    166 225 230
                                             235
    168 Gly Leu Gly Leu Val Ala Leu Ser Glu Arg Ala Leu Ala Gly Leu Leu
                                        250
                      245
    171 Glu Pro Arg Thr His Arg Gly Leu Tyr Ala Ser Pro Thr Arg Pro Met
                                      265
    174 Glu Thr Ala Leu Ala Gly Leu Tyr Ile Leu Glu Pro Arg Ser Glu Arg
                                  280
    177 His Ile Ser Ile Leu Glu Leu Glu Ser Glu Arg Ser Glu Arg Ser Glu
                              295
    180 Arg Pro Arg Ser Glu Arg Ala Ser Pro Gly Leu Asn Gly Leu Asn Ile
                          310
                                             315
    183 Leu Glu Ala Ser Asn Gly Leu Asn Leu Glu Ala Leu Ala Gly Leu Asn
                                         330
                       325
    186 Ala Arg Gly Leu Glu Gly Leu Tyr Pro Arg Gly Leu Thr Arg Pro Gly
                   340
                                     345
    189 Leu Pro Arg Val Ala Leu Val Ala Leu Leu Glu Ser Glu Arg Leu Glu
                                 360
    190 355
    192 Gly Leu Tyr Leu Glu Ser Glu Arg Gly Leu Asn Thr His Arg Ala Ser
                             375
    195 Pro Ile Leu Glu Thr Tyr Arg Ala Arg Gly Cys Tyr Ser Leu Tyr Ser
                           390
                                             395
    198 Ala Leu Ala Ala Ser Asn His Ile Ser Pro Arg His Ile Ser Ala Ser
    201 Asn Val Ala Leu His Ile Ser Ser Glu Arg Gly Leu Asn Val Ala Leu
                                      425
                   420
    204 Val Ala Leu Gly Leu Ala Leu Ala Pro His Glu Val Ala Leu Ala Arg
                                 440
    207 Gly Thr Arg Pro Ala Arg Gly Gly Leu Asn Ala Arg Gly Pro His Glu
    208 450
                             455
    210 Gly Leu Tyr Leu Tyr Ser Gly Leu Asn Ala Leu Ala Thr His Arg Pro
    211 465
                          470
                                             475
    213 His Glu Leu Glu Ser Glu Arg Leu Glu His Ile Ser Leu Tyr Ser Gly
                                         490
                       485
    216 Leu Tyr Leu Glu Gly Leu Asn Ala Leu Ala Met Glu Thr Gly Leu Ala
                                     505
    217
    219 Leu Ala Ala Ser Pro Pro Arg Ser Glu Arg Leu Glu Leu Glu Gly Leu
    220 515
                                  520
    222 Asn His Ile Ser Met Glu Thr Leu Glu Gly Leu
                              535
    223 530
    225 <210> SEQ ID NO: 5
    226 <211> LENGTH: 20
    227 <212> TYPE: DNA
C--> 228 <213> ORGANISM: Artificial
    230 <220> FEATURE:
```

RAW SEQUENCE LISTING

DATE: 03/13/2002 TIME: 14:31:43

PATENT APPLICATION: US/09/771,208

Input Set : A:\407T-923710US.txt

HIION. 05/03///1/200

Output Set: N:\CRF3\03132002\1771208.raw

	231	<223> OTHER INFORMATION: PCR primer									
	233	<400> SEQUENCE: 5									
	234	tggaagccag agacaagcag	20								
	237	<210> SEQ ID NO: 6									
	238	<211> LENGTH: 21									
	239	<212> TYPE: DNA									
C>	240	<213> ORGANISM: Artificial									
	242	<220> FEATURE:									
	243	<223> OTHER INFORMATION: PCR primer									
	245	<400> SEQUENCE: 6									
	246	agaaatggaa gccagagaca a									
	249	<210> SEQ ID NO: 7									
	250	250 <211> LENGTH: 22									
	251	<212> TYPE: DNA									
C>	252	<213> ORGANISM: Artificial									
	254	<220> FEATURE:									
	255	<223> OTHER INFORMATION: PCR primer									
	257	<400> SEQUENCE: 7									
	258	cttttgacac cttcctcgat tc	22								
	261	<210> SEQ ID NO: 8									
	262	<211> LENGTH: 21									
	263	<212> TYPE: DNA									
C>	264	<213> ORGANISM: Artificial									
	266	<220> FEATURE:									
	267	<223> OTHER INFORMATION: PCR primer									
	269	<400> SEQUENCE: 8									
	270	ctcaaaccac aggcctccgg a									
	273	<210> SEQ ID NO: 9									
	274	<211> LENGTH: 13908									
		<212> TYPE: DNA									
	276	<213> ORGANISM: Mus musculus									
	278	<400> SEQUENCE: 9									
		aaaagagggt ctgtgcaaag gcccaggagg gagaaaaaaa caaacaaaca acaacaaaaa	60								
		aaaacacatg ctatggtttg aatggaaaaa tatcccatga aggcttatgt atttgagtca	120								
		cttcttagct ggtagcactc acttttgaag gctgtaaagc cttcaatctg tgggtcctac	180								
		ccctttggca aaccttgatc tccaaagtta cataagcaca ggcacacact tccacttcct	240								
		ctgaggtttt ctaccaagaa aggatcaacc attcataaaa tgttggtcct agtgaaccct	300								
		geacattgta gaggettaaa aagtttaatt tgggeeteea aeteactaea eaggaaetee	360								
		agegggatee geetgteegt teatgetaae ettteaeega eatettgttt ttaagtttae	420								
	293	agaaaacgtt agggacctaa agaaggtcat tacattacag tacattacag tacaacagaa	480								
1 .		gttacaaagt agcaatgagg ggcttgggga tttagctcag tgctagagcg cttgcctagc	540								
\mathcal{N}	297	aagtgcaaga ccctaggttc ggtcctcagc tctgaaaaat caaaacaaaa	600								
	299	tagcaatgat aataatttta tggttgaggg gtcaccatga tatgaggaac tgtattaaac	660								
	301	ggtcgctgca ttagggagga tgaggaccac tgtggggctc agctgaagga agtgagttgc	720								
	303	tggtgtaggg caccggagtg ctagatgtaa accggtttcc tgtctccctt ctaaggctga	780								
		ctgcaccact aattoctgcc tecegtggag ggtgetttee aggeteeaag cetteetgee	840								
	307	atgttggaat gtgtcctgtg aaccatgaac cgagatcaat ctttcctccc ttccatcacc	900								
	309	tetgccaggt ggtttggtca tagtactcag tagagtaagg aggetggaag atttactaca	960								
	311	cctgacaaag aaaaattaat ctgtatgatc tcaaaaaaaa aaaaaaaaa aacaccacca	1020								

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/771,208

DATE: 03/13/2002 TIME: 14:31:43

Input Set : A:\407T-923710US.txt

Output Set: N:\CRF3\03132002\I771208.raw

313	ccaacaacaa	aaaaaccaac	aaaaaaccaa	aaccctttag	gagtgcagaa	gcacaggcac	1080
315	acacttccac	ttcctctgag	gttttctacc	aagaaaggat	caaccattca	taaaacgttg	1140
317	gtcttagtta	tccctgcaca	ttgtagaggc	ttaaaaagtt	taacttgggc	ctccaactca	1200
319	ctacacagaa	ctccagaggg	atccgcctgt	ccgttcatgc	taacctttca	ccgacatctt	1260
321	gtttttaagt	ttacagaaaa	cgttagggac	ctaaagaagg	taagcatcct	gctaagttac	1320
				tgagtaagag			1380
325	tccaggaaaa	cageeteece	cctccgcggc	cacacatacg	aatctatcgc	tgacaaagcc	1440
				gttcaccatt			1500
				attggttcgg			1560
331	gtgttgtgtt	tecttecagg	gccggcaggc	ggggcaccag	gcaaggcttg	gaagccgcgc	1620
				caacttcccc			1680
335	aagtggccat	tgacctttca	agcttttgag	cagtggggca	acagaacagt	atttcaaaga	1740
				ttcccatgag			1800
				attcaaagtg			1860
				ggcctcttac			1920
				aactccgggt			1980
				cgcaccccac			2040
347	ctcctctgta	gggtggccag	ggtgggtctc	ccgaagggca	agcaggagtt	gagctgagga	2100
				ggggactacc			2160
				gaggcgctca			2220
353	tctaggatgc	tggcggaggg	gacagtctct	ggttcgcttc	ccgaggtgcc	cgggagtggt	2280
				agctctgtgt			2340
				cgctggtcct			2400
				gtggatggct			2460
				attcgcggga			2520
				aggcattggc			2580
				ggcggagtcg			2640
				cacccggctc			2700
369	cggccggggc	ctctttaaag	cgctggcggg	ggctgcggtc	acgtgaggcg	gattcctgga	2760
371	aagttcctgg	aaagcggcct	ccgccgcggc	cgggcggggc	gcgaggggcg	ggaggcgggg	2820
373	agcgagggag	gcgcgtcggg	ctgggaagtc	gcgcgcacac	tcggctccgg	ggacagacgg	2880
375	ttaactcttg	ccaagtctcg	ccgcctctgc	ggctcccggg	ccttgggctt	ccccctgaa	2940
377	gcatgagcct	ttcctcccgc	agccgccaac	gctgcgcggg	tctcggacag	tgcgcgccgg	3000
379	gactccaggc	gegegeeete	aagatccctt	gtgcccggag	cccggaagct	tgcggcaggt	3060
381	accgctcgcg	aagcccgaag	gttccgcccg	gggggacagt	ggccgggagg	gcggcggggt	3120
				ggcgtccgca			3180
				tcaactgcct			3240
387	teggtetegg	gaaattttcc	gagcaccccc	accccccaac	aactgctacc	caaatttata	3300
389	atcctaataa	cctgatctcc	cgctcctccc	cgccagcctc	cgcccttgct	ccccacccc	3360
391	accccttctc	tttctcccat	ctcctccgct	tcaactggag	ggaaacccgg	cactggcgag	3420
393	caggggtgtc	agcctggggc	ggagaggggg	gggggaagct	aggcgacgat	ccctgggatt	3480
395	tttgtctgcc	tttggcgcag	aaaaactcgg	ttgcttttac	tgagcgcaga	gccgattgca	3540
				tcacccgggg			3600
399	cttgccccct	ggctcccccg	ccccttgtcc	gctggggagg	ctgcctagtg	cggaggcggc	3660
401	agtcgcggcg	gtggaggtaa	gacctcagtc	ccagttgatg	gcatggcccg	ctgcgctcgc	3720
				agctccggcg			3780
				caggagccgc			3840
				cgtgctccag			3900
409	gaggccgcct	ccgaggcagg	gatgcagcgg	ctggcgcgcc	gctagcgcac	cgcagcaccc	3960





VERIFICATION SUMMARY

DATE: 03/13/2002 PATENT APPLICATION: US/09/771,208 TIME: 14:31:44

Input Set : A:\407T-923710US.txt

Output Set: N:\CRF3\03132002\1771208.raw

```
L:228 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:5
 L:240 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:6
 L:252 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:7
 L:264 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:8
 L:747 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:10
 L:763 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:11
 L:779 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:12 L:809 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:13
 L:821 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:14
 L:833 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:15
 L:845 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:16
 L:857 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:17
 L:869 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:18
 L:881 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:19
 L:5087 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20
 L:5395 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20
 L:5439 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20
 L:5469 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20
 L:6659 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20
 L:6661 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20
L:7101 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20
L:10033 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20
 L:10317 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20
 L:11543 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20
 L:11545 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20
 L:12533 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20
 L:12739 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20
L:13435 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20 L:14005 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20 L:17465 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20
L:19205 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20
 L:21047 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20
 L:21055 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20
```